

LISTING OF CLAIMS

Please cancel claims 43-44, amend claims 19 and 20 as indicated, and add new claims 45-55.

1-13. (Cancelled)

14. (Previously presented) A delivery mixture comprising

a delivery agent consisting of a generation 2 to 5 dendrimer mixed with
an amount of a nucleic acid effective to mediate RNA interference (RNAi).

15-18. (Cancelled)

19. (Currently amended) The delivery mixture of claim 14, wherein the delivery mixture can deliver the nucleic acid into the cytoplasm of a living cell ~~is an RNA molecule~~.

20. (Currently amended) The delivery mixture of claim 14 [[19]], wherein the nucleic acid is an RNA molecule [[is]] selected from the group consisting of a small interfering RNA (siRNA), micro-RNA (miRNA) and short hairpin RNA (shRNA).

21. (Previously presented) The delivery mixture of claim 20, wherein the RNA molecule is miRNA.

22. (Previously presented) The delivery mixture of claim 20, wherein the RNA molecule is shRNA.

23. (Previously presented) The delivery mixture of claim 20, wherein the RNA molecule is siRNA.

24. (Previously presented) The delivery mixture of claim 23, wherein the siRNA comprises a sense strand and an antisense strand, wherein the antisense strand has a sequence sufficiently complementary to a target mRNA sequence to direct target-specific RNAi.

25. (Previously presented) The delivery mixture of claim 24, wherein the sense strand and antisense strand are crosslinked.

26. (Previously presented) The delivery mixture of claim 25, wherein the siRNA contains a single crosslink.

27. (Previously presented) The delivery mixture of claim 25, wherein the sense strand and antisense strand are psoralen crosslinked.

28. (Previously presented) The delivery mixture of claim 24, wherein the siRNA comprises a modification at the 3' OH terminus of the sense strand or antisense strand.

29. (Cancelled)

30. (Previously presented) The delivery mixture of claim 28, wherein the modification at the 3' OH terminus is photocleavable biotin.
- 31-32. (Cancelled)
33. (Previously presented) The delivery mixture of any one of claims 23-28, and 30, wherein the siRNA is between about 16 and 30 nucleotides in length.
34. (Previously presented) The delivery mixture of any one of claims 23-28, and 30, wherein the siRNA is about 21 nucleotides in length.
35. (Previously presented) The delivery mixture of any one of claims 24-28, and 30, wherein the antisense and sense strands are aligned such that the siRNA has 3' overhangs of between 1 and 4 nucleotides.
36. (Previously presented) The delivery mixture of claim 35, wherein the siRNA has 2-nucleotide 3' overhangs.
37. (Previously presented) The delivery mixture of claim 36, wherein the 2-nucleotide 3' overhangs are dTdT or UU.
38. (Previously presented) The delivery mixture of claim 14, wherein the dendrimer is selected from the group consisting of PAMAM, diaminobutane (DAB) and polyethylene glycol (PEG).
39. (Previously presented) The delivery mixture of claim 38, wherein the dendrimer is PAMAM.
40. (Previously presented) The delivery mixture of claim 39, wherein the PAMAM and the nucleic acid are present at a PAMAM: nucleic acid ratio of between about 10 µg and about 1mg PAMAM per 100 pmol nucleic acid.
41. (Previously presented) The delivery mixture of claim 39, wherein the PAMAM and the nucleic acid are present at a PAMAM: nucleic acid ratio of between about 20 µg and about 40 µg PAMAM per 100 pmol nucleic acid.
42. (Previously presented) The delivery mixture of claim 39, wherein the PAMAM and the nucleic acid are present at a PAMAM: nucleic acid ratio of about 40 µg PAMAM per 100 pmol nucleic acid.
- 43-44. Cancelled
45. (New) A delivery mixture comprising:
- a dendrimer selected from the group consisting of PAMAM, diaminobutane (DAB) or polyethylene glycol (PEG); and

an amount of a nucleic acid effective to mediate RNA interference (RNAi), wherein the nucleic acid is a small interfering RNA (siRNA) molecule or a short hairpin RNA (shRNA) molecule.

46. (New) The delivery mixture of claim 45 wherein the dendrimer is selected from the group consisting of a generation 2 dendrimer, a generation 3 dendrimer, and a generation 5 dendrimer.
47. (New) The delivery mixture of claim 46 wherein the siRNA is between about 16 and 30 nucleotides in length.
48. (New) The delivery mixture of claim 46 wherein the siRNA is about 21 nucleotides in length.
49. (New) The delivery mixture of claim 46, wherein the siRNA comprises a sense strand and an antisense strand, wherein the antisense strand has a sequence sufficiently complementary to a target mRNA sequence to direct target-specific RNAi.
50. (New) The delivery mixture of claim 49, wherein the sense strand and antisense strand are crosslinked.
51. (New) The delivery mixture of claim 50, wherein the siRNA contains a single crosslink.
52. (New) The delivery mixture of claim 50, wherein the sense strand and antisense strand are psoralen crosslinked.
53. (New) The delivery mixture of claim 49, wherein the siRNA comprises a modification at the 3' OH terminus of the sense strand or antisense strand.
54. (New) The delivery mixture of claim 53, wherein the modification at the 3' OH terminus is photocleavable biotin.
55. (New) The delivery mixture of claim 45 wherein the mixture is capable of delivering the said nucleic acid to discrete areas in the perinuclear cytoplasm of a cell.